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**Differential Argument Marking in Asia Minor Greek:  
Abstract and morphological case in nominative –  
accusative systems with Differential Case Marking**

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# 1. Introduction

**Topic:** Differential Case Marking phenomena in Asia Minor Greek: In certain environments the subject/object appears in a case different from that imposed by its syntactic function:

(1) *Differential Subject Marking in Pontic Greek*<sup>1</sup>

a. erθen                    enas                    kaloyeros  
come-PST.3SG    a                    monk<sub>M</sub>-SG.NOM  
'A monk came'

b. epiyen            o            kaloyeron            (instead of *kaloyeros*)  
go-PST.3SG    the<sub>M</sub>            monk<sub>M</sub>-SG.ACC  
'The monk went'

(2) *Differential Object Marking in Cappadocian Greek*<sup>2</sup>

- a. ama      tranizne      to   liko  
when   see-3PL      the wolf-SG.ACC  
‘as soon as they see the wolf’      (Axos; Dawkins 1916: 396)
- b. ivren                      ena likos      (instead of *liko*)  
find-PST.3SG      a      wolf-SG.NOM  
‘He found a wolf’      (Axos; Dawkins 1916: 402)

## Facts

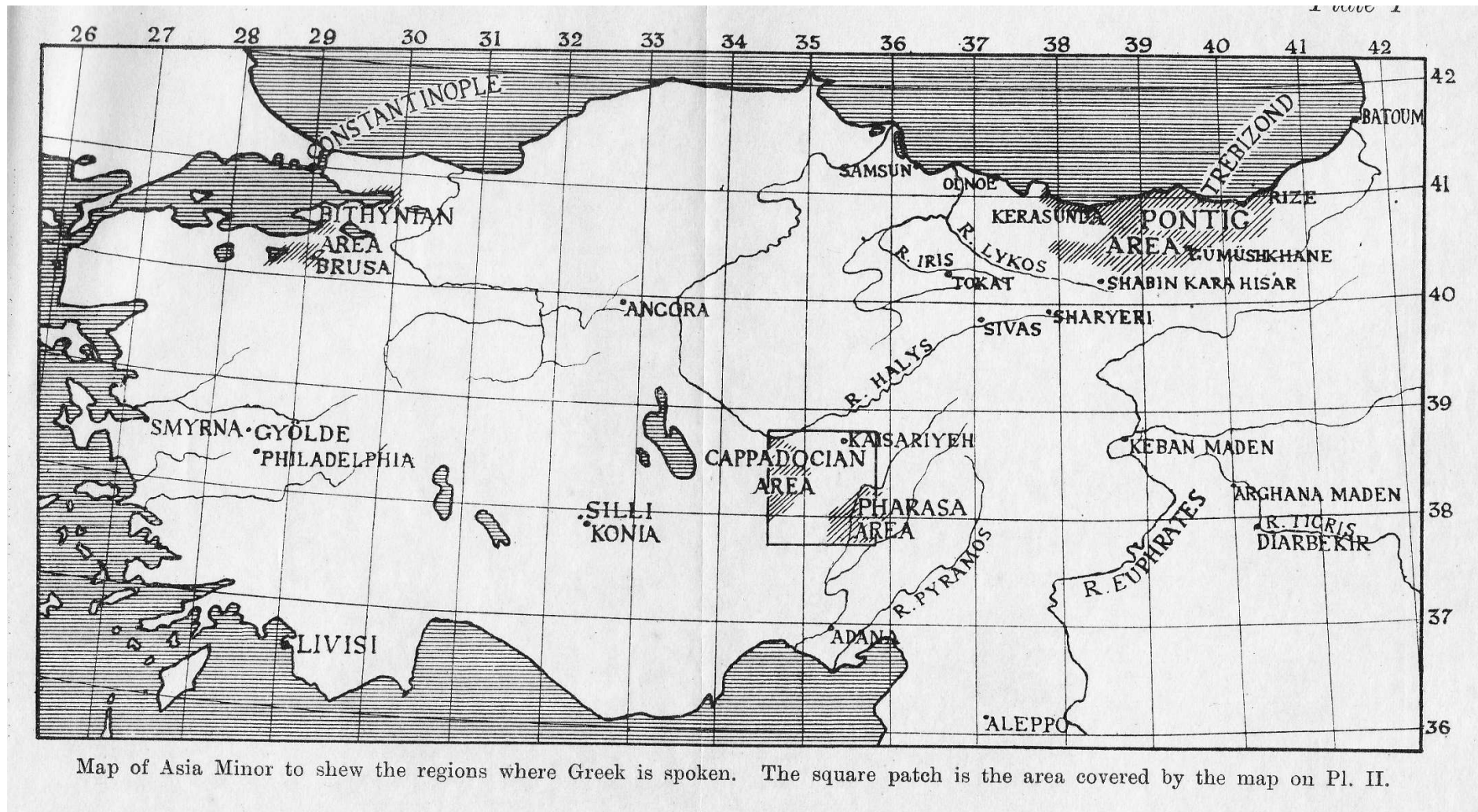
- ✓ Pontic Greek and Cappadocian Greek have a nominative – accusative case system
- ✓ In both dialects the nominative is expressed by means of an overt suffix, while the accusative in the singular is the morphological default
- ✓ In Pontic Greek, when the DP-subject has a definite article the N head appears in the accusative form, instead of the expected nominative (*Differential Subject Marking*)
- ✓ In Cappadocian Greek, when the object is indefinite it appears in the nominative form, instead of the expected accusative (*Differential Object Marking*)
- ✓ These phenomena appear only in the singular
- ✓ Differentiation does not involve a retreat to zero case exponence
  - in Pontic Greek the alternation is between two overt case forms: /-s/ for nominative, /-n/ for accusative
  - in Cappadocian Greek it is the differentiating case form that has overt exponent

## Claims

- ✓ These phenomena are instantiations of a generalized *Differential Argument (Case-)Marking* situation in Asia Minor Greek
- ✓ They are morphological in nature and they derive from postsyntactic impoverishment rules at *Morphological Structure*, which affect the constitution of the case node of the N head and determine its exponence
- ✓ These rules are triggered by the [+definite] specification of the D head of the relevant DP-argument

## 2. Background I: Asia Minor Greek

- ✓ A branch of Greek which includes the Greek varieties spoken by the indigenous Greek population of Asia Minor until the population exchange that took place after the Greek-Turkish war in the 1920s (Dawkins 1910, 1916)
- ✓ It covers various dialectal groups and stray varieties, the most salient of which are Pontic, Cappadocian, Pharasa, Silli, Livisi, etc.
- ✓ These dialects and varieties have developed in isolated areas and independently from the rest of the Greek-speaking world since the Selçuk invasion in the late 11<sup>th</sup> century AD and the collapse of Byzantine rule after the fall of Constantinople to the crusaders (1204 AD) and mostly after the 15<sup>th</sup> century AD, i.e. during the Ottoman period (Anastasiadis 1976; Horrocks 2010; Karatsareas 2011; Janse in press).<sup>3</sup>
- ✓ Inevitably, the long-term language contact with Turkish profoundly affected the AMG dialects and varieties so that they exhibit interference at all grammatical levels to a bigger or lesser extent, depending on historical and sociolinguistic factors (Dawkins 1910, 1916; Janse 2002, 2009, in press; see also Thomason & Kaufman 1988; Johanson 2002).



Map from Dawkins (1916) with the distribution of Asia Minor Greek dialects

### 3. Background II: Differential Argument Marking (DAM) for case

(See Bossong 1985, Comrie 1989, Woolford 2001, 2008, Aissen 2003, de Hoop & de Swart 2008, de Hoop & Malchukov 2007, 2008, Malchukov & de Swart 2009 for descriptions and overviews of DAM phenomena)

DAM in terms of case: the subject/object appears in a different case from the expected one depending on various factors

- ✓ functional: typicality of subject defined in terms of hierarchies (Comrie 1989, Aissen 2003)
- ✓ semantic features: agentivity, volitionality, control of action, definiteness, animacy etc. (de Hoop & Narasimham 2005, 2008, Kornfilt 2008)
- ✓ clausal features: tense/aspect/mood of the verb, clause type (Kornfilt 2008)
- ✓ markedness restrictions (Woolford 2008)

Differentiation is normally obtained by means of the alternation: overt case exponent vs. absence of case exponent.

Hypothesis: The argument that carries no case exponent is not assigned (syntactic, abstract) case.

(3) *Hindi* (examples from de Hoop & Narashiman 2008: 64)

a. raam=ne patthar=ko / patthar- $\emptyset$  toD|-aa

Raam=ERG stone=ACC / stone-NOM break-PFV.SG.M

‘Raam broke the / a stone’

b. raam= $\emptyset$  patthar=ko / patthar- $\emptyset$  toD|-taa hae

Raam=NOM stone=ACC / stone-NOM break-IPFV.SG.M be.PRS.3SG

‘Raam breaks the / a stone’

But, Keine & Müller (2008) explore DAM instances, which involve an alternation between different overt case exponents

- ✓ DAM derives from impoverishment which deprives the subject/object from certain case properties and results in marking by a less specific morphological exponent

### 3.1. Typology of DAM

- I. DAM is regulated by the properties of a ‘typical’ subject/object (Comrie 1989, Aissen 2003)
- ✓ A typical subject/object is expected not to have case (exponents), whereas a non-typical subject/object is expected to have the relevant case (exponent)
  - ✓ Typicality is defined in terms of different scales/hierarchies, usually for animacy and definiteness
- (4) *Hale/Silverstein Hierarchies* (Hale 1972, Silverstein 1976)
- a. *Grammatical Function Hierarchy*  
Subject > Object
  - b. *Person/Animacy Hierarchy*  
1PL > 1SG > 2PL > 2SG > 3HUMAN.SG > 3ANIMATE.PL > 3ANIMATE.SG > 3INANIMATE.SG > 3INANIMATE.PL
  - c. *Definiteness Hierarchy*  
Pronoun > Proper Name > Definite > Indefinite Specific > NonSpecific

- (5) *Aissen's Harmonic Alignment for Grammatical Function and Definiteness*
- a. Subject/Pronoun > Subject/Proper Name > Subject/Definite > Subject/Indefinite Specific > Subject/NonSpecific
  - b. Object/NonSpecific > Object/Indefinite Specific > Object/Definite > Object/Proper Name > Object/Pronoun

Properties:

- Distinctiveness: A subject carries case (exponents) so that it is distinguished from objects and vice versa
- Iconicity: A marked subject/object (i.e. non-typical) is the one that has case (exponents)
- Differential Subject Marking (DSM) is the mirror image of Differential Object Marking (DOM)

- II. DAM is tied to a specific property of the subject/object (de Hoop & Narasimham 2005, 2008 on Hindi; Kornfilt 2008 on Turkish)
- ✓ Typical subjects/objects or subjects/objects carrying a certain property (e.g. definiteness, animacy, agency, volitionality, etc.) are the ones which are overtly case marked
  - ✓ The inverse situation from I
  - ✓ Example: DOM and DSM in terms of specificity in Turkish (Enç 1991, Kornfilt 1997, 2008, Lewis 2000, Lyons 2000, Göksel & Kerslake 2005, von Heusinger and Kornfilt 2005 among others)

(6) *DOM in Turkish*

- a. Zeynep- $\emptyset$       adam-1      gör-dü  
Zeynep-NOM      man-ACC      see-PST  
'Zeynep saw the man'
- b. Zeynep- $\emptyset$       bir adam- $\emptyset$       gör-dü  
Zeynep-NOM      a man      see-PST  
'Zeynep saw a man'
- c. Zeynep- $\emptyset$       bir adam-1      gör-dü  
Zeynep-NOM      a man-ACC      see-PST  
'Zeynep saw a certain man'

(7) *DSM in Turkish*

- a. arı-nın      çocuğ-u      sok-tuğ-un-u      duy-du-m  
bee-GEN      child-ACC      sting-NM.EM-3SG-ACC      hear-PST-1SG  
'I heard that the bee stung the child'
- b. çocuğ-u      arı-∅      sok-tuğ-un-u      duy-du-m  
child-ACC      bee      sting-NM.EM-3SG-ACC      hear-PST-1SG  
'I heard that bees stung the child'
- c. çocuğ-u      bir arı-∅      sok-tuğ-un-u      duy-du-m  
child-ACC      a      bee      sting-NM.EM-3SG-ACC      listen-PST-1SG  
'I heard that a bee stung the child'
- d. çocuğ-u      bir arı-nın      sok-tuğ-un-u      duy-du-m  
child-ACC      a      bee-GEN      sting-NM.EM-3SG-ACC      listen-PST-1SG  
'I heard that a (certain) bee stung the child'

### III. DAM as a syntactic or morphological effect (Woolford 2008, Kornfilt 2008)

- ✓ Morphological conditions (well-formedness, restrictions on marked combination of features) block or force case marking on the subject/object
- ✓ Syntactic structure and/or operations condition the assignment of case on the subject/object

## 3.2. Some notes on DSM

- DSM is crosslinguistically less consistent (Woolford 2001, de Hoop & Malchukov 2007, de Hoop & de Swart 2008, Malchukov & de Swart 2009)
- DSM case studies are mainly documented by ergative languages
- DSM is hardly found in nominative – accusative languages and more specifically in the nominative – accusative case alternation axis:
  - the case of subject, i.e. nominative, is usually the unmarked (or less specific) case form and it cannot impoverish further so as to derive a differentiated less marked/specific form
- ☞ DSM could be found in nominative – accusative systems, in which nominative is morphologically the marked/more specific form (marked nominative systems: König 2008, 2009)
- ☞ Pontic Greek: DSM in a nominative – accusative system with morphologically marked nominative

## 4. DSM in Pontic Greek

Pontic Greek:<sup>4</sup>

- ✓ nominative – accusative case system
- ✓ DP-subjects are marked with nominative irrespective of the construction (transitive, unaccusative, unergative) and the theta-role they realize
- ✓ definite DPs are marked with the definite article

In certain varieties of Pontic Greek (Kerasunda, Kotiora, Trapezunda, Ophis, Surmena and Chaldia):

- ✓ in the presence of the definite article the N head of the DP-subject appears in the accusative case
- ✓ in indefinite DP-subjects and bare subjects the N head appears in the nominative
- ✓ the phenomenon appears only in the singular and with a specific class of nouns, namely masculine nouns of the *-o* class.

- (8) a. epiyen                    o                    kaloyeron  
 go-PST.3SG            the<sub>M</sub>            monk<sub>M</sub>-SG.ACC  
 ‘The monk went’
- b. erθen                    enas                    kaloyeros  
 come-PST.3SG    a                    monk<sub>M</sub>-SG.NOM  
 ‘A monk came...’
- c. o                    ađelfon                    entoken                    aton  
 the<sub>M</sub>            brother<sub>M</sub>-SG.ACC            hit-PST.3SG            CL3-M.SG.ACC  
 ‘The brother hit him...’
- d. enas            rđakos                    eskotosen                    aton  
 a                    dragon<sub>M</sub>-SG.NOM            kill-PST.3SG            CL3-M.SG.ACC  
 ‘A dragon killed him...’

- (9) a. epiyen                    o                    ðespotis  
 go-PST.3SG            the<sub>M</sub>            bishop<sub>M</sub>-SG.NOM  
 ‘The bishop went’
- b. erθen                    enas                    ðespotis  
 come-PST.3SG    a                    bishop<sub>M</sub>-SG.NOM  
 ‘A bishop came’
- c. o            vasileas                    entoken                    aton  
 the<sub>M</sub>    king<sub>M</sub>-SG.NOM    hit-PST.3SG            CL3-M.SG.ACC  
 ‘The king hit him...’
- d. enas    vasileas                    eskotosen                    aton  
 a            king<sub>M</sub>-SG.NOM    kill-PST.3SG            CL3-M.SG.ACC  
 ‘A king killed him...’

- (10) a. epiyen                    i                    kari  
 go-PST.3SG            the<sub>F</sub>            woman<sub>F</sub>-SG.NOM  
 ‘The woman went’
- b. erθen                    enas            kari  
 come-PST.3SG    a            woman<sub>F</sub>-SG.NOM  
 ‘A woman came’
- c. i            yineka                    entoken            aton...  
 the<sub>F</sub>    woman<sub>F</sub>-SG.NOM    hit-PST.3SG    CL3-M.SG.ACC  
 ‘The woman hit him...’
- d. enas    yineka                    eskotosen            aton  
 a            woman<sub>F</sub>-SG.NOM    kill-PST.3SG    CL3-M.SG.ACC  
 ‘A woman killed him...’

## The trigger of DSM: definiteness

- ✓ DSM applies only on definite DPs which contain a definite article
- ✓ DSM does not apply on personal pronouns and deictic pronouns and determiners, which are by definition definite and higher in the hierarchy than definite DPs

- (11) a. epiyen                    atos                    /                    \*aton  
go-PST.3SG                PR3-M.SG.NOM /                PR3-M.SG.ACC  
‘He/this one went...’
- b. ekinos                    /                    \*ekinon                    eskotosen                    aton  
that-M.SG.NOM /                    that-M.SG.ACC                    kill-PST.3SG                    CL3-M.SG.ACC  
‘That one killed him...’

☞ Pontic DSM is not defined in terms of a ‘typical’ subject referring to the definiteness hierarchy

(12) *Definiteness hierarchy* (Hale 1972, Silverstein 1976)

Pronoun	>	Proper Name	>	Definite	>	Indefinite Specific	>	Non Specific
☞		☞		☞		☞		☞
*DSM		DSM		DSM		*DSM		*DSM

☞ Pontic DSM does not apply on functional elements that are inherently specified as [+definite] and realize the relevant features of the D head.

## The case properties of the differentiated subject

(13) erθen                      [DP o                      kalon  
come-PST.3SG              the<sub>M</sub>-SG.NOM              good-M.SG.ACC  
o                      aθropon]  
the<sub>M</sub>-SG.NOM              man<sub>M</sub>-SG.ACC  
'The good man came'

- ✓ The N head and its adjectival modifiers appear in accusative
- ✓ The definite article appears in the nominative
- ✓ all occurrences of the definite article are in nominative (Pontic Greek has obligatory polydefiniteness or definiteness agreement)

☞ The whole DP-subject is case marked for nominative. More evidence:

- ✓ Pontic Greek exhibits case concord within the DP. All elements of the DP are case marked with the case relevant to the grammatical function of the DP. However, in differentiated DP-subjects a deictic determiner appears in nominative, although the N head of the DP-subject is in accusative

- (14)
- |     |                    |                          |                          |                          |
|-----|--------------------|--------------------------|--------------------------|--------------------------|
| a.  | erθen              | autos                    | o                        | aθropon                  |
|     | come-PST.3SG       | this-M.SG.NOM            | the <sub>M</sub> -SG.NOM | man <sub>M</sub> -SG.ACC |
| a'. | *erθen             | auton                    | o                        | aθropon...               |
|     | come-PST.3SG       | this-M.SG.ACC            | the <sub>M</sub> -SG.NOM | man <sub>M</sub> -SG.ACC |
|     | 'This man came...' |                          |                          |                          |
| b.  | ekinos             | o                        | aθropon                  | entoken                  |
|     | that-M.SG.NOM      | the <sub>M</sub> -SG.NOM | man <sub>M</sub> -SG.ACC | hit-PST.3SG              |
|     | aton               |                          |                          |                          |
|     | CL3-M.SG.ACC       |                          |                          |                          |
| b'. | *ekinon            | o                        | aθropon                  | entoken                  |
|     | that-M.SG.ACC      | the <sub>M</sub> -SG.NOM | man <sub>M</sub> -SG.ACC | hit-PST.3SG              |
|     | aton               |                          |                          |                          |
|     | CL3-M.SG.ACC       |                          |                          |                          |
|     | 'That man hit him' |                          |                          |                          |

- ✓ In Pontic Greek the nominal and adjectival predicates as well as the predicative modifiers always agree in case with the DP they modify.<sup>5</sup> When they modify a differentiated DP-subject, they appear in nominative, although the N head of the DP-subject is in the accusative:

- (15) a. o yjon tranos entone  
 the<sub>M</sub>-SG.NOM son<sub>M</sub>-SG.ACC big-M.SG.NOM become-PST.3SG  
 ‘The son grew big’
- b. autos o aθropon kalos en  
 this-M.SG.NOM the<sub>M</sub>-SG.NOM man<sub>M</sub>-SG.ACC good-M.SG.NOM is  
 ‘This man is good’
- c. atos kalos aθropos en  
 PR3-M.SG.NOM good-M.SG.NOM man<sub>M</sub>-SG.NOM be-3SG  
 ‘He is a good man’
- d. autos o ðeskalon  
 this-M.SG.NOM the<sub>M</sub>-SG.NOM teacher<sub>M</sub>-SG.ACC  
 kalos aθropos en  
 good-M.SG.NOM man<sub>M</sub>-SG.NOM be-3SG  
 ‘This teacher is a good man’

## Interim summary

- Pontic DSM is triggered by definiteness but it does not refer to the definiteness hierarchy; it rather refers to the feature itself.
- It is a DP-internal phenomenon, in the sense that it applies only to the lexical items of the DP and it does not affect the case properties of the whole DP
- It is morphologically conditioned: it applies only in the singular number of a certain inflectional class of masculine nouns and adjectives.
- The differentiated subject is assigned the expected abstract case for subject (i.e. nominative) which however surfaces in a different case form (i.e. accusative)
- This case form, i.e. the accusative, involves an overt exponent too and it is the unmarked case form

## 4.1. Noun inflection of Pontic Greek involves marked-nominative subsystems

(16a) *Pontic Greek noun declension (a relevant fragment of it; abstracting away from dialectal and lexical variation and heteroclisis)*

MASCULINE NOUNS						
-o CLASS			-a/e CLASS			
+ ANIMATE		– ANIMATE	+ ANIMATE			– ANIMATE
SINGULAR						
NOM	ḍéskal- <b>o-s</b>	xor- <b>ó-s</b>	máer- <b>a-s</b>	kólak- <b>a-s</b>	kléft- <b>e-s</b>	mín- <b>a-s</b>
GEN	ḍéskal- <b>u</b>	xor- <b>ú</b>	máer- <b>a-∅</b>	kólak- <b>a-∅</b>	kléft- <b>e-∅</b>	mín- <b>a-∅</b>
ACC	ḍéskal- <b>o-n</b>	xor- <b>ó-n</b>	máer- <b>a-n</b>	kólak- <b>a-n</b>	kléft- <b>e-n</b>	mín- <b>a-n</b>
PLURAL						
NOM	ḍéskal- <b>i</b>	xor- <b>ús</b>	máer- <b>i</b>	kólak- <b>es</b>	kléft- <b>i</b>	mín- <b>as</b>
GEN	ḍéskal- <b>íon</b>	xor- <b>íon</b>	maer- <b>íon</b>	kolak- <b>íon</b>	kleft- <b>íon</b>	min- <b>íon</b>
ACC	ḍéskal- <b>us</b>	xor- <b>ús</b>	máer- <b>us</b>	kólak- <b>as</b>	kléft- <b>us</b>	mín- <b>as</b>
	‘teacher’	‘dance’	‘cook’	‘cajoler’	‘thief’	‘month’

(16b)

	FEMININE NOUNS			NEUTER NOUNS			
	-a/i CLASS			-o CLASS	-i CLASS	IMPARISYLLABIC	
	+ ANIMATE	- ANIMATE					
SINGULAR							
NOM	θayatér-a-∅	lír-a-∅	ník-i-∅	ksíl-o-n	peð-í-n	stóma-n	rápsim-o-n
GEN	θayatér-a-s	lír-a-s	ník-i-s	ksil-íu	peð-íu	stomat-íu	rapsimat-íu
ACC	θayatér-a-n	lír-a-n	ník-i-n	ksíl-o-n	peð-í-n	stoma-n	rápsim-o-n
PLURAL							
NOM	θayatér-es	lír-as	ník-as	ksíl-a	peð-í-a	stómat-a	rapsímat-a
GEN	θayater-íon	lir-íon	nik-íon	ksil-íon	peð-íon	stomat-íon	rapsimat-íon
ACC	θayatér-es	lír-as	ník-as	ksíl-a	peð-í-a	stómat-a	raspímat-a
	‘daughter’	‘pound’	‘victory’	‘wood’	‘child’	‘mouth’	‘sewing’

## Notes

### Masculine nouns, singular:

- ✓ the nominative is expressed by the exponent /-s/, which has more specific distribution than the exponent /-n/ of the accusative
  - ✓ /-n/ is the case default for singular: it expresses the accusative in masculine and feminine nouns, as well as both the nominative and the accusative in neuter nouns
- ☞ the nominative form is more marked than the accusative form

### Feminine nouns, singular

- ✓ the nominative form is expressed by the elsewhere zero exponent -∅
- ☞ the nominative is the unmarked form

## 4.2. Pontic DSM as a morphological effect

- ✓ Syntactically, DP-subjects are always marked with nominative
- ✓ When the D head is specified as [+def] it triggers DSM in all lexical elements inside the DP
- ✓ Functional elements that are inherently specified as [+definite] are not affected, perhaps because they merge with a D head in order to satisfy its requirements.
- ✓ The noun surfaces in an accusative form, which is a less specific form in singular
  
- ☞ Pontic DSM is the effect of certain operations that take place at the Morphological Structure (MS) after Spell-Out and regulate the insertion of case exponents in the case terminal nodes of the lexical items
  
- ☞ These operations have the effect of blocking the insertion of the expected nominative exponent in favour of the less specified one (accusative)

## The elements of the analysis

- ✓ Retreat to a less specific form involves *impoverishment* (Bonet 1991, Noyer 1992, 1998, Halle & Marantz 1993, 1994, 2008, Halle 1997, Bobaljik 2002, 2008b, Frampton 2002, Embick & Noyer 2008, Calabrese 2008 a.o.)
- ✓ Alternation between two overt case forms for the same grammatical function  
→ certain properties of the case terminal node are affected
- ✓ Formulation in terms of the *feature decomposition of case hypothesis* (Calabrese 1996, 2008, Halle 1997, Halle & Vaux 1998, McFadden 2004, Alexiadou & Müller 2008, a.o.)<sup>6</sup>
- ✓ Case terminal nodes are decomposed in features, and case exponents refer to these features

- (17) *Case features*
- [ $\pm$ oblique]: [+oblique] is assigned to the oblique arguments of verbs and to the complements of nouns (McFadden 2004).
  - [ $\pm$ inferior]: [+inferior] is assigned to an argument in the presence of a local case competitor (McFadden 2004, Bobaljik 2008a).<sup>7</sup>
- (18) *Case terminal nodes*
- nominative: [..., –oblique, –inferior]
- accusative: [..., –oblique, +inferior]

The relevant /-s/ and /-n/ exponents differ only in that /-s/ is additionally specified as [–inferior]

- (19) *The relevant exponents*  
/-s/ ↔ [–plural, ..., –inferior]  
/-n/ ↔ [–plural, ...,]

DSM is the result of an impoverishment rule which removes the [–inferior] feature specification from the nominative case node

- it blocks the insertion of /-s/
- it allows the insertion of the less specified exponent /-n/

(20) *DSM-triggering impoverishment rule*  
[–inferior] → ∅ / [DP [D +def] [N/A[–o class] –plural, –oblique, \_\_\_\_ ]]

(21) *The derivation of the differentiated subject*

MS representation after Spell-Out:

[ D[+def | –pl, –obl, –inf] ] [ rðak-o-[–pl, –obl, –inf]]

Impoverishment:

[ D[+def | –pl, –obl, –inf] ] [ rðak-o-[–pl, –obl]]

↕

o

rðak-o-

↕

n

→ o rðak-o-n ‘the dragon-SG.ACC’

## Predicted facts

- Pontic Greek lacks DOM:
  - ✓ /-s/ is specified as [-inferior]
  - ✓ It is incompatible with the accusative terminal node specification, which includes the [+inferior] specification
  - ✓ No rule can provide the appropriate environment for its insertion
  
- DSM does not apply in feminine nouns of the *-a/i/e* class
  - ✓ The nominative singular in these nouns is expressed by the zero exponent  $-\emptyset$
  - ✓ The nominative singular terminal node is radically impoverished for case (and possibly number) (a case of metasyncretism, see Harley 2008)
  - ✓ /-n/ cannot be inserted because it is more specified than the terminal node

## 5. DOM in Cappadocian Greek

The varieties that make a distinction between nominative and accusative in the singular, exhibit Differential Object Marking, in the sense that indefinite and incorporating objects appear in nominative, instead of the expected accusative (Dawkins 1916, Janse 2004, Spyropoulos & Tiliopoulou 2006, Spyropoulos & Kakarikos 2009, 2011, Karatsareas 2011)

- (22) a. *istera pikan yamos* (instead of *yamo*)  
afterwards make-PST.3PL marriage-SG.NOM  
'After that, they got married' (Potamia; Dawkins 1916: 456)
- b. *meya loyos mi les* (instead of *loyo*)  
big word-SG.NOM NEG say-2SG  
'Don't say big words'  
(Axos; Mavroxalyvidis & Kesisoglou 1960: 172)



- d. to *škili*                      *feri*                      s    ta    *provata*                      *likos*  
 the dog-SG.NOM            bring-3SG    to    the sheep-PL.ACC            wolf-SG.NOM  
 (instead of *liko*)  
 ‘The dog brings a wolf to the sheep’  
 (Axos; Mavroxalyvidis & Kesisoglou 1960: 180)
- e. *iferen*                      *paltadzis*            (instead of *paltadzi*)  
 bring-PST.3SG    wood-cutter-SG.NOM  
 ‘He brought a wood-cutter’                      (Delmesos; Dawkins 1916: 312)

- ✓ The differentiated object appears in a more marked case form
  - nominative is expressed by the exponent /-s/
  - accusative is expressed by the elsewhere exponent -∅
  - the exponent /-n/ does not exist in Cappadocian Greek
- ✓ Cappadocian Greek has also a marked-nominative case system
- ✓ Definiteness is associated with the accusative form, which is the less specific form

(24) *Case terminal nodes*  
 nominative: [..., –oblique, –inferior]  
 accusative: [..., –oblique, +inferior]

(25) *The relevant formatives*  
 /-s/ ↔ [–plural, ..., –oblique]  
 /-∅/ ↔ elsewhere

DOM is the result of impoverishment, which removes the [–oblique] feature specification from the accusative case node

- it blocks the insertion of the /-s/ exponent
- the exponent /-n/ does not exist in Cappadocian Greek
- the elsewhere exponent  $-\emptyset$  is the only exponent that can be inserted under this node

(26) *DOM-triggering impoverishment rule*

[–oblique]  $\rightarrow \emptyset$  / [DP [D +def] [N –plural, +inferior, \_\_\_\_ ]

(27) *The derivation of the indefinite object*

MS representation after Spell-Out:

[ D[-def]] [ layo-[-pl, -obl, +inf]]

↕

ena

layo-

↕

-s

→ ena layo-s ‘a hare-SG.NOM’

(28) *The derivation of the definite object*

MS representation after Spell-Out:

[ D[+def]] [ layo-[-pl, -obl, +inf]]

Impoverishment:

[ D[+def]] [ layo- [-pl, +inf]]

↕

to

layo-

↕

-∅

→ to layo ‘the hare-SG.ACC’

Predicted fact: Cappadocian Greek does not have DSM

- (29) a. na par ke sas to đjavolos  
SUBJ take-3SG and you the devil-NOM  
'May the devil take you!' (Delmesos; Dawkins 1916: 316)
- b. eljos mavrosen to prosopo  
sun-SG.NOMblacken-PST.3SG the face-SG.ACC  
'The sun blackened my face' (Delmesos; Dawkins 1916: 312)

The DOM-triggering impoverishment rule cannot apply on the nominative terminal node because of its structural description (confliting [inferior] values)

## **6. Pontic DSM + Cappadocian DOM = Asia Minor Greek DAM: A morphological DAM**

Common properties of Pontic DSM and Cappadocian DOM

- ✓ triggered by the [+definite] specification of the DP
- ✓ morphological restrictions
  - they apply only in singular
  - Pontic DSM is restricted to a certain inflectional class
- ✓ at the surface level, association of definiteness with the accusative form
- ✓ they are both indentificational (in the sense of de Hoop & Narasimhan 2005, 2008 and Kornfilt 2008), i.e. the differentiated subject/object is identified as definite

- ⇒ Pontic DSM and Cappadocian DOM are surface instantiations of the same postsyntactic MS operation existing in Asia Minor Greek
- ✓ an impoverishment rule, triggered by the [+definite] specification of the DP and resulting in blocking the insertion of the exponent of the nominative case in favour of a less specified exponent
  - ✓ in the marked-nominative subsystems of these dialects this less specified exponent coincides with the accusative exponent resulting in case differentiation ← it explains why these phenomena appear only in the singular (only in the singular the nominative is more marked than the accusative)
  - ✓ this impoverishment rule was subject to the specific properties of the nominal inflectional system(s) of the recipient dialect(s) and the general conditions that govern the morphological manifestation of the terminal nodes that syntax provides as its output so that it gave DSM in Pontic and DOM in Cappadocian

- ⇒ A DAM situation which is clearly morphological, in the sense that the differentiated subject/object is assigned the expected abstract case in syntax, and differential case marking is the result of the way MS processes and manifests the relevant case nodes
  
- ⇒ Asia Minor Greek DAM is very similar to Turkish DOM (Enç 1991, Kornfilt 1997, 2008, Lewis 2000, Lyons 2000, Göksel & Kerslake 2005, von Heusinger and Kornfilt 2005), in which accusative case is identified with specificity. The two systems are probably historically connected either by means of direct contact or in the context of an Anatolian Sprachbund (Tzitzilis 1989, in press).



- ✓ This development was facilitated by the fact that the inanimate old masculine nouns got assimilated to the old neuter inflection, in which nominative and accusative singular are expressed by the zero exponent -∅:
  - (a) the exponent /-s/ was reanalysed as belonging to the stem resulting in agglutination (Spyropoulos et al. submitted)
  - (b) the exponent /-s/ was omitted irrespective of the function of the DP
    - ➔ unpredictable variation in the surface forms

(31) *definite subject without /-s/*

a. to milo en makrja (instead of *milos*)

the mill be-3SG far

‘The mill is far away’

(Potamia; Dawkins 1916: 94)

b. to milo djavolju yjatax ton (instead of *milos*)

the mill devil-GEN shelter be-PST.3SG

‘the mill was the devil’s shelter’

(Axos; Mavroxalyvidis & Kesisoglou 1960: 196)

- (32) a. *definite object with /-s/*  
ivren                    to   milo-s (instead of *milo*)  
find-PST.3SG    the mill-SG.NOM  
'He found the mill'                    (Delmesos; Dawkins 1916: 308)
- b. *indefinite object without /-s/*  
ivra                    ena milo (expected *milos* due to DOM)  
find-PST.3SG    the mill-SG.NOM  
'I found a mill'                    (Axos; Dawkins 1916: 390)

(33)

		Delmesos / Potamia	Axos	
SG	NOM	milo(s)	milo	milos
	GEN	milu > mil	miloju	milozju
	ACC	milo(s)	milo	milos
PL	NOM	milus	miloja	milozja
	GEN	-	-	-
	ACC	milus	miloja	milozja

- ✓ The impoverishment rules started to spread to more nouns: (a) in Cappadocian Greek it seems that DOM affects all nouns that have distinct nominative and accusative forms; (b) in some Pontic varieties (e.g. Nikopolis), DSM affects all masculine nouns, not only those ending in *-os*.

(34) *Cappadocian*

- a. iferen                      paltadzis      (instead of *paltadzi*)  
bring-PST.3SG   wood-cutter-SG.NOM  
'He brought a wood-cutter'                      (Delmesos; Dawkins 1916: 312)
- b. pfasa                      ena kleftis (instead of *klefti*)  
catch-PST.1SG   a   thief-SG.NOM  
'I caught a thief'      (Axos; Mavroxalyvidis & Kesisoglou 1960: 169)

(35) *Nikopolis Pontic* (Papadopoulos 1955: 159)

a. erθen                      o                      đespotin                      so                      xorion  
come-PST.3SG    the<sub>M</sub>-SG.NOM    bishop<sub>M</sub>-SG.ACC    in-the    village  
‘The bishop came to my village’

b. o                      psaran                      epiasen                      enan                      opsarin  
the<sub>M</sub>-SG.NOM    fisherman<sub>M</sub>-SG.ACC    catch-PST.3SG    a                      fish  
‘The fisherman caught a fish’

## 7. A potential extension. Applying the analysis in Turkish

Turkish DOM (Enç 1991, Kornfilt 1997, 2008, Lewis 2000, Lyons 2000, Göksel & Kerslake 2005, von Heusinger and Kornfilt 2005): when [–specific] the object appears in the nominative case, which is the unmarked form, i.e. it involves no overt morphology

- (36)
- |    |                            |            |         |
|----|----------------------------|------------|---------|
| a. | Zeynep-∅                   | adam-1     | gör-dü  |
|    | Zeynep-NOM                 | man-ACC    | see-PST |
|    | ‘Zeynep saw the man’       |            |         |
| b. | Zeynep-∅                   | bir adam-∅ | gör-dü  |
|    | Zeynep-NOM                 | a man      | see-PST |
|    | ‘Zeynep saw a man’         |            |         |
| c. | Zeynep-∅                   | bir adam-1 | gör-dü  |
|    | Zeynep-NOM                 | a man-ACC  | see-PST |
|    | ‘Zeynep saw a certain man’ |            |         |

Turkish DSM (Kornfilt 1997, 2008, Göksel & Kerslake 2005): in certain complement clauses the subject appears in the genitive case. In the same environment, when the subject is [–specific], it appears in the nominative, i.e. the unmarked form

- (37)
- a. arı-nın      çocuğ-u      sok-tuğ-un-u      duy-du-m  
bee-GEN      child-ACC      sting-NM-3SG-ACC      hear-PST-1SG  
‘I heard that the bee stung the child’
- b. çocuğ-u      arı-∅      sok-tuğ-un-u      duy-du-m  
child-ACC      bee      sting-NM-3SG-ACC      hear-PST-1SG  
‘I heard that bees stung the child’
- c. çocuğ-u      bir arı-∅      sok-tuğ-un-u      duy-du-m  
child-ACC      a      bee      sting-NM-3SG-ACC      listen-PST-1SG  
‘I heard that a bee stung the child’
- d. çocuğ-u      bir arı-nın      sok-tuğ-un-u      duy-du-m  
child-ACC      a      bee-GEN      sting-NM-3SG-ACC      listen-PST-1SG  
‘I heard that a (certain) bee stung the child’

## DOM and DSM does not apply on certain occasions (Kornfilt 2008)

✓ When the object is assigned an oblique or lexical case

- (38) a. Hasan kitab-ı çocuğ-a (\*bir çocuk-Ø) ver-di  
Hasan book-ACC child-DAT give-PST  
'Hasan gave a book to the/a child'
- b. Hasan at-a (\*at-Ø) biner  
Hasan horse-DAT ride-HAB  
'Hasan rides horses' or 'Hasan rides the horse'

- ✓ When the object/subject carries an agreement suffix, e.g. in partitive constructions (Kornfilt 2008):

(39) *Blocked DOM: Partitive as object* (Kornfilt 2008: 88)

a. Kitap-lar-ın iki-sin-i al,  
book-PL-GEN two-3-GEN buy.IMP  
geri-sin-i kotu-du bırak  
remainder-3-ACC box-LOC leave.IMP

a'. \*Kitap-lar-ın iki-sin al,  
book-PL-GEN two-3-GEN buy.IMP  
geri-sin-i kotu-du bırak  
remainder-3-ACC box-LOC leave.IMP

b. Kitap-lar-dan iki-sin-i al,  
book-PL-DAT two-3-GEN buy.IMP  
geri-sin-i kotu-du bırak  
remainder-3-ACC box-LOC leave.IMP

b'. \*Kitap-lar-dan iki-sin al,  
book-PL-DAT two-3-gen buy.IMP  
geri-sin-i kotu-du bırak  
remainder-3-ACC box-LOC leave.IMP  
'Take (any) two of the books and leave the rest in the box'  
(both specific and non-specific)

(40) *Blocked DSM: Partitive as a subject in complement clause*

(Kornfilt 2008: 89)

a. Kitap-lar-ın iki-sin-in kaybol-duğ-un-u bil-iyor-um  
book-PL-GEN two-3-GEN disappear-NM-3SG-ACC know-PROG-1SG

a'. \*Kitap-lar-ın iki-sin kaybol-duğ-un-u bil-iyor-um  
book-PL-GEN two-3 disappear-NM-3SG-ACC know-PROG-1SG

b. Kitap-lar-dan iki-sin-in kaybol-duğ-un-u bil-iyor-um  
book-PL-DAT two-3-GEN disappear-NM-3SG-ACC know-PROG-1SG

b'. \*Kitap-lar-dan iki-sin kaybol-duğ-un-u bil-iyor-um  
book-PL-DAT two-3 disappear-NM-3SG-ACC know-PROG-1SG

‘I know that (any) two of the books got lost’

(both specific and non specific)

## Similarities with Asia Minor Greek DAM

- ✓ retreat to an unmarked form
  - ✓ blocking of DSM and DOM in Turkish may be viewed as an indication that the expected abstract case is always assigned to the relevant argument and that DOM and DSM mask its overt manifestation
- ⇒ DOM and DSM in Turkish involve some kind of postsyntactic operation which may fail to apply under certain circumstances

## Hypothesis: Turkish has a similar DAM rule

- ✓ an impoverishment rule that deletes certain features from the case node, blocking the insertion of the accusative and genitive formative in favour of the zero exponent  $-\emptyset$ , which is also the exponent of the nominative
- ✓ The relevant feature may be  $[-\text{oblique}]$ , since DOM/DSM does not affect lexical/oblique cases
- ✓ The impoverishment rule affects only the case nodes on lexical heads

(37) *Turkish DOM/DSM rule*  
 $[-\text{oblique}] \rightarrow \emptyset / [\text{DP} [\text{D} \text{-spec}] [\text{N} \text{ ,....., } \_\_\_ ]]$

## Explaining the blocking of DOM/DSM

- ✓ The impoverishment rule affects only the [+oblique] feature, which is arguably included in the specification of both the accusative and the genitive, given that the genitive is ‘structural’ in the sense that it depends on agreement checking (Kornfilt 2003, 2006, 2008). Lexical and other ‘inherent’ cases are [+oblique], thus they are not affected by the impoverishment rule
- ✓ Cancellation due to the existence of an Agr morpheme in partitive constructions: The case marker depends on the Agr morpheme (Kornfilt 2008), which is a functional element. Similarity with Pontic Greek, where the rule affects only the terminal case nodes on lexical items

## 7. Conclusions

- ✓ Differential Subject and Object Marking in Pontic and Cappadocian Greek are morphological in nature
- ✓ Differential Argument (Case-)Marking is not a uniform phenomenon
- ✓ Its effects may derive from PF-interface properties and postsyntactic processing
- ✓ Asia Minor Greek Differential Argument (Case-)Marking reveals the non-isomorphism between abstract and morphological case
- ✓ The relation between abstract case and morphological case on such occasions can be captured by means of a feature decomposition of case approach and postsyntactic operations at MS that affect the feature constitution of the case terminal node resulting in differentiating exponence

**A final note:** Can we apply Baker's (2015) dependent case analysis of DOM to Cappadocian Greek DOM? Probably not:

- ✓ The analysis relies on the assumption that the differentiated objects occupy different positions in the syntactic structure → assignment of a dependent case may be cancelled if the argument is not 'dependent' on another argument in a given Spell-Out domain
- ✓ There is no evidence that objects occupy different positions relevant to their case marking in Cappadocian Greek (see Janse 2006 for a discussion of object positioning in Cappadocian Greek)
- ✓ Such an analysis would miss the correlation with Pontic DSM
- ✓ Difficult to account for the morphological conditions on the phenomena

## Notes

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<sup>1</sup> Pontic Greek is an Asia Minor Greek dialect, which was spoken in the areas at the north coast of Asia Minor (nowadays Turkey) until the population exchange after the Greek-Turkish War in the 1920's. In its original form it was a dialectal group consisting of various subdialects and varieties (Oeconomides 1908, 1958, Papadopoulos 1919, 1953, 1955, Dawkins 1931, 1937, Tombaidis 1988, 1996, Drettas 1997). It is now spoken in Greece by the descendants of the exchanged population mostly in the form of Pontic Greek Koine (Tombaidis 1992, 1996, Chadzisavidis 1995 on this development).

<sup>2</sup> Cappadocian Greek was an Asia Minor Greek dialectal group spoken by the indigenous Greek population in the Cappadocian plateau in central Turkey until the population exchange in the 1920s (Dawkins 1910, 1916). It included various subdialects and varieties, such as Delmesos, Potamia, Misti, Axos, Phloita, Malakopi, Fertek, Ulaghatsh, Semendere, etc. It exhibited severe interference at all grammatical levels from Turkish, due to the long-term contact with it (Dawkins 1910, 1916, Janse 2002, 2009; see also Thomason & Kaufman 1988, Johanson 2002). It is now considered extinct.

<sup>3</sup> After the defeat of the Byzantine army in the battle of Manzikert in 1071 AD and the subsequent collapse of the Byzantine rule in Asia Minor, which was completed by the fall of Constantinople first to the crusaders (1204 AD) and then to the Ottomans (1453 AD),

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and the establishment of the Ottoman Empire in the mid 15<sup>th</sup> century, the Greek-speaking population of Asia Minor went into a gradual cultural transformation which resulted in their religious islamization and linguistic turkicization (see Tsalikoglou 1970; Vryonis 1971). According to a document dated back in 1437 and cited in Dawkins (1916: 1, fn1; published in Lambros 1910), the Greek vernacular had already lost ground in many Asia Minor areas by the mid of the 15<sup>th</sup> century. Several pockets of Greek-speaking populations, however, many of which were bilingual in Greek and Turkish, were still extant in the beginning of the 20<sup>th</sup> century (see Dawkins 1916; Papadopoulos 1919; Vryonis 1971; Kitromilides & Alexandris 1984-1985; Augustinos 1992; Balta & Anagnostakis 1994; Janse 2002, in press).

<sup>4</sup> See Holton et al. (2012) on Greek in general and Papadopoulos (1955), Tombaidis (1988), Drettas (1997) on Pontic Greek.

<sup>5</sup> See Spyropoulos (2005) for the phenomenon in Greek in general.

<sup>6</sup> An idea that goes back to the European Structuralists (Hjelmslev 1935, Jakobson 1936) and has been developed extensively in work in all of sorts of frameworks since then (Bierwisch 1967, Kiparsky 1997, Wunderlich 1997, among others). See the discussion in Blake (2001, 2009) and in Corbett (2012).

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<sup>7</sup> Alternatively, the [+inferior] features marks the dependent case(s) in a case hierarchy:

(i) *Case Hierarchy* (Blake 2001, Malchukov & Spencer 2009)

nominative > accusative > oblique/lexical case

nominative > ergative, accusative > genitive > dative > locative > instrumental,  
ablative > others

See the discussion in Marantz (1992), Grosu (1994), Bittner & Hale (1996), Vogel (2003), McFadden (2004), Bobaljik (2008), Legate (2008). See also Baker & Vinokurova (2010) and Baker (2015) for a syntactic implementation of dependent case.

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